

## Appendix: Supplementary material [posted as supplied by author]

**Table A. Characteristics of included and excluded patients**

Characteristics	Included patients n=84,439	Excluded patients due to missing data n=23,161
Female sex, n (%)	41,092 (48.7)	12,175 (52.6)
Age in years, mean (SD)	73.5 (12.6)	75.7 (12.1)
Stroke onset to admission time, n (%)		
<3 hours	27,271 (32.3)	5,801 (25.0)
3-6 hours	17,098 (20.2)	4,529 (19.6)
>6 hours	40,070 (47.4)	12,831 (55.4)
Premorbid mRS score, n (%)		
0	53,039 (62.8)	12,558 (54.2)
1	11,251 (13.3)	3,108 (13.4)
2	9,657 (11.4)	3,396 (14.7)
3	6,922 (8.2)	2,590 (11.2)
4	2,876 (3.4)	1,188 (5.1)
5	694 (0.8)	321 (1.4)
NIHSS score, mean (SD)	6.5 (6.7)	7.8 (7.0)
Comorbidities, n (%)		
Diabetes	23,296 (27.6)	6,810 (29.4)
Previous stroke	21,413 (25.4)	6,435 (27.8)
Atrial fibrillation	24,173 (28.6)	7,342 (31.7)
Level of stroke care, n (%)		
Stroke center	21,876 (25.9)	3,564 (15.4)
Regional stroke unit	16,256 (19.3)	3,298(14.2)
Local stroke unit	33,257 (39.4)	7,360 (31.8)
No stroke unit	13,050 (15.5)	8,939 (38.6)
Ventilation required, n (%)	3,056 (3.6)	897 (4.0)
Complications, n (%)		
Pneumonia	4,666 (5.5)	1,405 (6.1)
Thrombosis or pulmonary embolism	260 (0.3)	88 (0.4)
Length of hospital stay in days, mean (SD)	10.1 (7.6)	9.3 (7.9)

Abbreviations: i.a., intra arterial, mRS, modified Rankin Scale; NIHSS, National Institutes of Health Stroke Scale, SD, standard deviation; rtPA, tissue plasminogen activator.

**Table B. Comparison of outcome and mortality in regression models under inclusion of patients with missing values**

OTT intervals	Favourable outcome (mRS 0/1)		Mortality		Lower mRS score at discharge	
	Adjusted OR <sup>a</sup> (95% CI)		Adjusted OR <sup>a</sup> (95% CI)		Adjusted OR <sup>a</sup> (95% CI)	
	based on n=84,439 patients	based on n=107,600 <sup>b</sup> patients	based on n=84,439 patients	based on n=107,600 <sup>b</sup> patients	based on n=84,439 patients	based on n=107,600 <sup>b</sup> patients
0-90 min	2.49 (2.12-2.92)	2.39 (2.05-2.79)	0.85 (0.67-1.08)	0.81 (0.64-1.02)	1.37 (1.24-1.51)	1.25 (1.14-1.38)
91-180 min	1.86 (1.71-2.02)	1.80 (1.66-1.95)	0.99 (0.87-1.13)	0.89 (0.79-1.01)	1.18 (1.12-1.25)	1.15 (1.09-1.21)
181-270 min	1.26 (1.08-1.46)	1.23 (1.06-1.42)	0.99 (0.76-1.28)	0.91 (0.71-1.16)	1.15 (1.04-1.27)	1.09 (0.99-1.12)
>270 min	1.25 (1.01-1.55)	1.21 (0.98-1.49)	1.45 (1.08-1.92)	1.32 (1.01-1.72)	0.92 (0.81-1.06)	0.92 (0.82-1.05)

<sup>a</sup> Adjusted for sex, age, premorbid mRS score, NIHSS score, diabetes, previous stroke, atrial fibrillation, ventilation, pneumonia, thrombosis or pulmonary embolism, level of stroke care, and length of hospital stay.

<sup>b</sup> excluding 1,684 patients with intraarterial approaches; imputation of data: for mRS: last observation carried forward (assuming no improvement due to thrombolytic therapy), other parameters (mainly the NIHSS at admission): median of parameters of observed data

**Table C. Distribution of mRS score at discharge**

Treatment and OTT interval	mRS score at discharge, n (%)							N
	0	1	2	3	4	5	6	
No intravenous rtPA	16,150 (21.8)	15,452 (20.8)	12,536 (16.9)	7,944 (10.7)	12,590 (17.0)	5,379 (7.3)	4,125 (5.6)	74,176
Intravenous rtPA								
0-90 min	213 (17.1)	170 (13.7)	208 (16.7)	193 (15.5)	206 (16.5)	151 (12.1)	104 (8.4)	1,245
91-180 min	823 (17.0)	748 (15.5)	716 (14.8)	713 (14.7)	843 (17.4)	592 (12.2)	403 (8.3)	4,838
181-270 min	235 (19.1)	190 (15.4)	180 (14.6)	195 (15.9)	222 (18.0)	124 (10.1)	84 (6.8)	1,230
>270 min <sup>a</sup>	103 (14.3)	97 (13.5)	75 (10.4)	138 (19.1)	132 (18.3)	95 (13.2)	81 (11.2)	721
Any interval	1,771 (17.3)	1,532 (14.9)	1,434 (14.0)	1,550 (15.1)	1,840 (17.9)	1,236 (12.0)	900 (8.8)	10,263

<sup>a</sup> Includes mismatch approaches between 4.5 h-12h (n=721 patients).

Abbreviations: CI, confidence interval; mRS, modified Rankin scale; OR, odds ratio; OTT, stroke onset to treatment time; rtPA, tissue plasminogen activator.